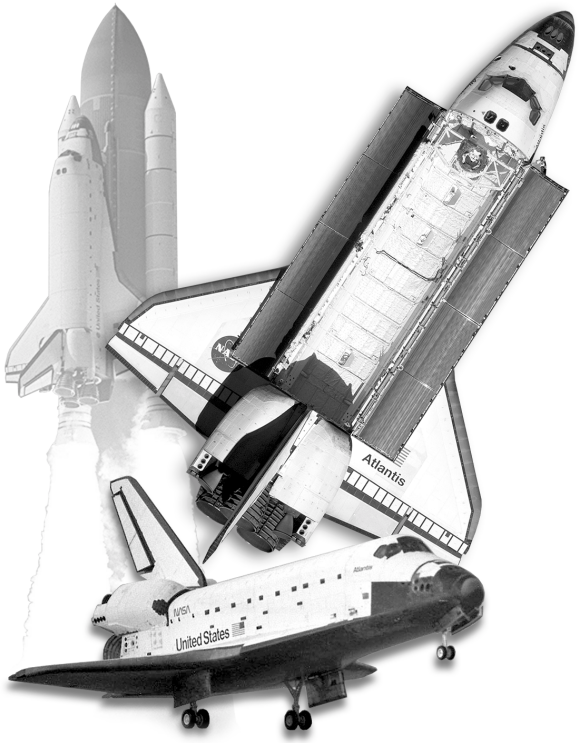


Canberra Space Centre

FACT SHEET

www.cdscc.nasa.gov

Space Shuttle

Triumph, tragedy , and the future

Space Shuttle Fleet

Name	Orbiter#	First Launched
Enterprise	OV-100	Atmopsheric flight tests only
Columbia	OV-102	April 12, 1981
Challenger	OV-99	April 4, 1983
Discovery	OV-103	August 30, 1984
Atlantis	OV-104	October 3, 1985
Endeavour	OV-105	May 7, 1992

The idea of a *space shuttle* to transport people and cargo into Earth orbit was first discussed back in the late 1950s. At that time, the idea of missions to the Moon and Mars, and space stations orbiting the Earth seemed to be a possibility in the not too distant future.

The development of the space program however, from the first satellite in 1957, and the first humans in space in 1961, set goals in space exploration that did not include the development of a reusuable spacecraft.

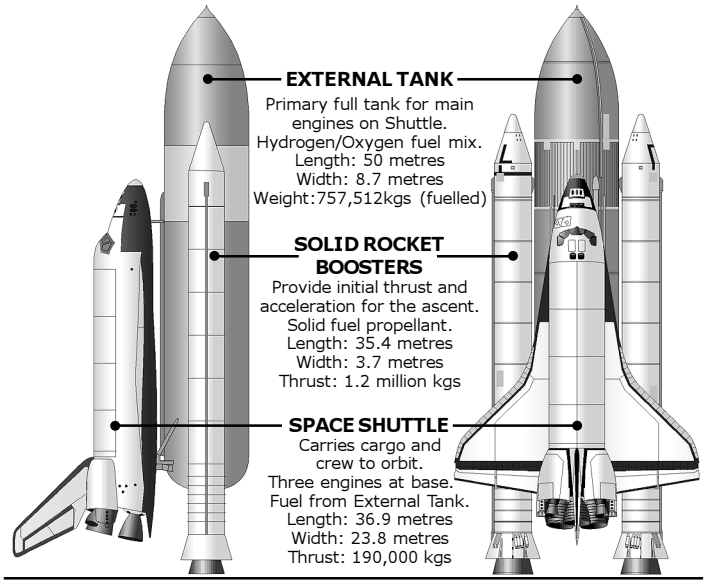
Not until the late 1960s was the idea of space shuttle again seriously considered. As the Apollo-Moon missions began winding down, NASA decided that in response to the Soviet (Russian) *Salyut* space station program, to develop their own orbiting outpost, to be known as *Skylab*, that would be serviced by a vehicle that could routinely travel into space.

However, development of a shuttle proved difficult and the opportunity to use a it for *Skylab* was lost when the space station crashed back to Earth in 1979, spreading debris across areas of Western Australia.

In the years that followed, development of the vehicle continued. In the late 70s the first tests of a full-scale vehicle known as *Enterprise* commenced. This vehicle was designed to be lifted to altitude by a modified 747 jet, detach, and then glide back to Earth for landing. The tests proved that the shuttle could fly and land safely on a conventional runway.

Rocket engine technology was also another stumbling block. To lift the heavy loads expected to be carried into space by the shuttle, new reusuable, and more powerful engines had to be designed.

Spaceflight has never been completely safe. The crews of the shuttle Challenger and Columbia knew and accepted the risks. Their pioneering spirit serves to inspire new generations of explorers.



The final design of the shuttle was determined by many factors. Companies wanted to use the vehicle to deliver satellites into space, others wanted to use it as a scientific laboratory to continue the work of Skylab. Some saw the shuttle as an orbiting repair shop or as an Earth observation outpost.

The space shuttle became all these things and more. The maiden flight of shuttle *Columbia* too place on April 12, 1981 (coincidentally, 20 years after the first human flew into space). This first mission tested many of the crucial shuttle systems.

Over 110 flights have since been flown by the shuttle. Sadly, on January 28, 1986 the shuttle *Challenger* exploded shortly after launch, and the shuttle Columbia broke up during reentry on February 1, 2003. The remaning shuttles are *Atlantis*, *Discovery*, & *Endeavour*.

The shuttle's main mission now is to assist in building the new *International Space Station*. It also serves as an orbital laboratory, and occasional repair flights to the Hubble Space Telescope.

More info: **http://spaceflight.nasa.gov/shuttle/**

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